

WHAT IS CLAIMED IS:

1. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, is satisfied; and

assigning the channel for the service area based on the FDD method to said request, if said condition is satisfied.

2. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and a handover frequency of the mobile

station related to said request is high, is satisfied; and

assigning the channel for the service area based on the FDD method to said request, if said condition is

09339000-062201  
102229-00060900

satisfied.

3. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and a handover frequency of the mobile station related to said request is low, is satisfied; and

- assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

4. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and the maximum reception power value of a forward common channel of the mobile station related to said request is low, is satisfied; and

assigning the channel for the service area based on the FDD method to said request, if said condition is satisfied.

- 5 5. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is  
10 issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and the maximum reception power value of a forward common channel of the mobile station related to  
15 said request is high, is satisfied; and

assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

- 20 6. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is  
25 issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to

said request, is satisfied, and a type of communication related to said request; and

assigning either the channel for the service area based on the FDD method or the channel for the service area based on the TDD method to said request depending on said type of communication, if said condition is satisfied.

7. The channel assigning method as claimed in claim 6, wherein said assigning step assigns the channel for the service area based on the FDD method to said request, if said type of communication is voice communication and said condition is satisfied, and assigns the channel for the service area based on the TDD method to said request, if said type of communication is data communication and said condition is satisfied.

8. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose handover frequency is high; and switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on

the FDD method.

9. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and whose handover frequency is low; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

10. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose transmission power is high; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.



the FDD method.

13. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and whose reception power of a forward common channel of a base station with which the mobile station currently communicates is high; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

14. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which has a balance between reverse traffic and forward traffic; and

switching the assigned channel of the detected mobile

station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

- 5 15. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

10 detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which does not have a balance between reverse traffic and forward traffic; and

15 switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

- 20 16. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

25 detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on

the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method; and

5           switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

10   17.   A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

15           detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on the FDD method, if the assigned channel of the mobile  
20   station is switched from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method; and

          switching the assigned channel of the detected mobile station from the channel for the service area based on the  
25   FDD method to the channel for the service area based on the TDD method.

18. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

5 detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which currently performs a particular type of communication; and

10 switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

15 19. The channel assigning method as claimed in claim 18, wherein said particular type of communication is voice communication.

20 20. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

25 detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which currently performs a particular type of communication; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

5

21. The channel assigning method as claimed in claim 20, wherein said particular type of communication is data communication.

10 22. The channel assigning method as claimed in claim 8, 10, 12, 14, 16 or 18, wherein said detecting step is performed, if traffic or interference of the service area based on the TDD method is high.

15 23. The channel assigning method as claimed in claim 9, 11, 13, 15, 17 or 20, wherein said detecting step is performed, if traffic or interference of the service area based on the FDD method is high.

20 24. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

25 detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned, if traffic or interference of the service area

based on the TDD method is high; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

25. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned, if traffic or interference of the service area based on the FDD method is high; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

20

26. The channel assigning method as claimed in any one of claims 1-6, 8-18, 20, 24 and 25, wherein said FDD method is a CDMA-FDD method and said TDD method is a CDMA-TDD method.

25

27. A communication apparatus for assigning a channel for use in communication between a mobile station and a base

station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, is satisfied; and

means for assigning the channel for the service area based on the FDD method to said request, if said condition is satisfied.

28. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and a handover frequency of the mobile station related to said request is high, is satisfied; and

means for assigning the channel for the service area based on the FDD method to said request, if said condition is satisfied.

29. A communication apparatus for assigning a channel for

use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel  
5 assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and a handover frequency of the mobile station related to said request is low, is  
10 satisfied; and

means for assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

30. A communication apparatus for assigning a channel for  
15 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel  
20 assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and the maximum reception power value of a forward common channel of the mobile  
25 station related to said request is low, is satisfied; and

means for assigning the channel for the service area based on the FDD method to said request, if said condition

is satisfied.

31. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and the maximum reception power value of a forward common channel of the mobile station related to said request is high, is satisfied; and

means for assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

32. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, is satisfied, and a type of communication related to said request; and

means for assigning either the channel for the service area based on the FDD method or the channel for the service area based on the TDD method to said request depending on said type of communication, if said condition  
5 is satisfied.

33. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus  
10 comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose handover frequency  
15 is high; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

20

34. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

25 means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based

on a TDD method can be assigned and whose handover frequency is low; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

35. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose transmission power is high; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

36. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is

currently assigned and a channel for a service area based on a TDD method can be assigned and whose transmission power is low; and

means for switching the assigned channel of the  
5 detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

37. A communication apparatus for assigning a channel for  
10 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a  
channel for a service area based on a TDD method is  
15 currently assigned and a channel for a service area based on a FDD method can be assigned and whose reception power of a forward common channel of a base station with which the mobile station currently communicates is low; and

means for switching the assigned channel of the  
20 detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

38. A communication apparatus for assigning a channel for  
25 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and whose reception power of a forward common channel of a base station with which the mobile station currently communicates is high; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

39. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which has a balance between reverse traffic and forward traffic; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

40. A communication apparatus for assigning a channel for use in communication between a mobile station and a base

station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which does not have a balance between reverse traffic and forward traffic; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

41. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method; and

means for switching the assigned channel of the detected mobile station from the channel for the service

area based on the TDD method to the channel for the service area based on the FDD method.

42. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

43. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is

currently assigned and a channel for a service area based on a FDD method can be assigned and which currently performs a particular type of communication; and

means for switching the assigned channel of the  
5 detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

44. A communication apparatus for assigning a channel for  
10 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a  
channel for a service area based on a FDD method is  
15 currently assigned and a channel for a service area based on a TDD method can be assigned and which currently performs a particular type of communication; and

means for switching the assigned channel of the  
detected mobile station from the channel for the service  
20 area based on the FDD method to the channel for the service area based on the TDD method.

45. A communication apparatus for assigning a channel for  
use in communication between a mobile station and a base  
25 station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a

channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned, if traffic or interference of the service area based on the TDD method is high; and

5 means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

10 46. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

15 means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned, if traffic or interference of the service area based on the FDD method is high; and

20 means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

47. The communication apparatus as claimed in any one of  
25 claims 27-46, wherein said communication apparatus is a control station which controls a base station.

48. The communication apparatus as claimed in any one of claims 27-46, wherein said communication apparatus is a base station.

09339000.00000000